

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF MISSISSIPPI  
WESTERN DIVISION**

**FRED BECK; ET AL.,**

**PLAINTIFFS,**

**VS.**

**CIVIL ACTION NO. 3:03CV60-P-D**

**KOPPERS, INC., f/k/a KOPPERS INDUSTRIES, INC.;  
ET AL.,**

**DEFENDANTS.**

**CONSOLIDATED WITH**

**HOPE ELLIS, ET AL.,**

**PLAINTIFFS,**

**VS.**

**CIVIL ACTION NO. 3:04CV160-P-D**

**KOPPERS, INC., f/k/a KOPPERS INDUSTRIES, INC.;  
ET AL.,**

**DEFENDANTS.**

**MEMORANDUM OPINION**

These matters come before the court upon Defendants' Motion to Exclude Expert Testimony of James G. Dahlgren, M.D. [464-1], Motion to Exclude Expert Testimony of Dr. William R. Sawyer [474-1], and Motion to Exclude Expert Testimony of Michael A. Wolfson, M.D. [477-1]. Upon due consideration of the motions and the responses filed thereto, the court is prepared to rule.

**I. FACTUAL BACKGROUND**

The instant case currently involves 12 plaintiffs who assert claims of negligence, gross negligence, negligence per se, intentional tort, conspiracy, strict liability, trespass, nuisance, and failure to warn against Koppers, Inc., Beazer East, Inc., and Illinois Central Railroad.

Koppers, Inc. and Beazer East, Inc. are each partially responsible for chemical use at Koppers, Inc.'s Grenada wood-treatment facility which treats railroad ties and telephone poles with

creosote and pentachlorophenol. Illinois Central is the plant's largest customer. The plaintiffs' claims center around the basic charge that the defendants allowed harmful chemicals to pollute their neighborhood, the Tie Plant Community, located on the northeast side of the facility, thereby causing them physical and property damage.

Though this case originally involved 110 plaintiffs, upon motion by the defendants the court severed the claims of 98 of the plaintiffs and ordered separate trials on the remaining 12. Under consideration are the claims of the first plaintiff, Kenesha Barnes on behalf of the estate of her mother Sherrie Barnes who died of breast cancer in 1998 at 36.

Essentially, Barnes offers the testimony of three causation experts to prove that the agents in question – *i.e.* pentachlorophenol, creosote, and/or the constituents therein – caused Sherrie Barnes's breast cancer. These experts are Dr. James Dahlgren, Dr. William Sawyer, and Dr. Michael Wolfson.

Currently before the court are the defendants' motions in limine to exclude the testimony of Dahlgren, Sawyer, and Wolfson for failure to meet Fed. R. Evid. 702 standards.

As a preliminary matter, the defendants argue *inter alia* that the testimony of Dahlgren, Sawyer, and Wolfson should be excluded as cumulative. On pages 8-9 in her response to the defendants' motion to exclude the testimony of Wolfson, the plaintiff writes:

In the case of Dr. Dahlgren, plaintiff's medical toxicologist, Dr. Dahlgren addresses the issue of general causation. Dr. Sawyer, on the other hand, addresses the issue of dose on a daily basis, as it relates to Sherrie Barnes. Dr. Sawyer also provides critical information to plaintiff's medical experts in the sense that he also conducted a risk assessment regarding Sherrie Barnes's lifetime exposure to these hazardous materials. This risk assessment demonstrated the magnitude of Sherrie's dose and how her chances of developing the disease was magnified as a result of defendants' failure to properly manage their environmental responsibilities. Finally, Dr. Wolfson completed the circle by addressing the issue of specific causation, given the patient's

prior medical and family history, and more importantly her lifetime exposure to these toxic chemicals and her ultimate development of cancer.

In other words, in this passage the plaintiff avers that Dahlgren is proffered for general causation, Sawyer for daily dosage and risk assessment, and Wolfson on specific causation. The plaintiff will be held to these assertions. Therefore, in the event the court allows their testimony, the aforesaid experts will be limited to their respective areas in their testimony with one exception: each of them may testify with regard to how their testimony links together to present the whole of the plaintiff's argument that the agents in question generally can cause breast cancer and specifically caused Sherrie Barnes's breast cancer. So limited, the court concludes that the testimony will not be cumulative, but rather complimentary of each other. At the same time, however, the parties are cautioned that cumulative testimony of any sort will not be allowed.

## **II. DISCUSSION**

### **A. Standards**

#### **1. Rule 702 Standards**

Fed. R. Evid. 702 provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

The current text of Rule 702, as amended in 2000, reflects the Supreme Court's decisions in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) and *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137 (1999). "In *Daubert* the Court charged trial judges with the responsibility of acting as gatekeepers to exclude unreliable expert testimony, and the Court in *Kumho* clarified

that this gatekeeper function applies to all expert testimony, not just testimony based in science.”

Advisory Committee’s Note on 2000 Amendment of Fed. R. Evid. 702.

For the court to be the arbiter of the validity of a given scientific theory is indeed a heavy burden. As Judge Kozinski observed:

Our responsibility then, unless we badly misread the Supreme Court’s opinion [in *Daubert*], is to resolve disputes among respected, well-credentialed scientists about matters squarely within their expertise, in areas where there is no scientific consensus as to what is and what is not ‘good science,’ and occasionally to reject such expert testimony because it was not ‘derived by the scientific method.’ Mindful of our position in the hierarchy of the federal judiciary, we take a deep breath and proceed with this heady task.

*Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 43 F.3d 1311, 1316 (9<sup>th</sup> Cir. 1995).

Ultimately, the district court must “ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” *Daubert.*, 509 U.S. at 589. Under the familiar *Daubert/Kumho* standards and their progeny, it is not the court’s duty to determine in a motion in limine to exclude an expert’s testimony whether the expert in question is correct. This decision falls squarely within the province of the jury. Essentially, the court is the gate-keeper charged with determining whether the expert’s testimony is reliable and relevant enough to not be junk science or mere paid-for opinions.

There are many factors to consider in whether to open the gate to an expert. These factors begin with Fed. R. Civ. P. 26(a)(2)’s provisions regarding expert reports. Next come the primary factors under Fed. R. Evid. 702. To aid in considering the essentials of Rule 702, the decision in *Daubert* set forth several factors the courts should consider in its gate-keeping function. The Advisory Committee’s Note on the 2000 of Rule 702 sets forth additional factors. For the purpose of clarity, the court will set forth all of the factors germane to considering whether to open the gate

in the following manner:

**Fed. R. Civ. P. 26(a)(2)**

1. Did the expert turn in an expert report?
2. Did the expert report contain:
  - (a) a complete statement of all opinions?
  - (b) the basis and reasons therefor?
  - (c) the data considered in forming the opinion?
  - (d) any exhibits to be used as a summary of opinions?
  - (e) the qualifications of the witness?
  - (f) publications authored by witness in the last 10 years?
  - (g) compensation
  - (h) other cases in which the expert has testified in the last 4 years?
3. Were the expert disclosures made at least 90 days before trial? Or in the case of rebuttal evidence, within 30 days before trial?
4. Were the opinions supplemented pursuant to FRCP 26(e)(1) (with respect to testimony of an expert from whom a report is required under subdivision (a)(2)(B) the duty [to supplement] extends to both information contained in the report and to information provided through a deposition of the expert and any additions or other changes to this information shall be disclosed by the time the party's disclosures under Rule 26(a)(3) are due – usually 30 days before trial)?

**Fed. R. Evid. 702**

5. Is the witness qualified by knowledge, skill, experience, training, or education?
6. Is the testimony based on sufficient facts?
7. Is the testimony the product of reliable methods?
8. Did the witness apply those methods to the facts reliably?

**Daubert factors in determining Rule 702 requirements**

9. Can or has the theory/technique been tested? Can the theory/technique be challenged or is it a subjective, conclusory approach?
10. Is the theory/technique subject to peer-review or publication?

11. Is there a known or potential rate of error of the theory/technique when applied?

12. Where standards and controls used?

**Advisory Committee Notes to 2000 Amendment of FRE 702 factors**

13. Did the theory arise from litigation or independent research?

14. Is there “too great an analytical gap between the data and the opinion proffered,” that is, does the theory “fit” with the facts of the case? *General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997).

15. Did the expert adequately consider alternative explanations?

16. Was the expert “as careful as he would have been in his regular professional work outside his paid litigation consulting”? *Sheehan v. Daily Racing Form, Inc.*, 104 F.3d 940, 942 (7<sup>th</sup> Cir. 1997).

17. Is the expert’s field of expertise known to reach reliable results for the type of opinion proffered?

“[A] trial judge *may* consider one or more of the more specific factors that *Daubert* mentioned when doing so will help determine that testimony’s reliability ... the test of reliability is ‘flexible,’ and *Daubert*’s list of specific *factors neither necessarily nor exclusively applies to all experts or in every case.*” *Kumho*, 526 U.S. at 141 (1999) (emphasis in original). “The trial court must have the same kind of latitude in deciding *how* to test an expert’s reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability, as it enjoys when it decides *whether or not* that expert’s relevant testimony is reliable.” *Kumho*, 526 U.S. at 152. The district court has wide discretion in determining the admissibility of expert testimony, and its decision will be disturbed only for abuse of discretion. *Moore v. Ashland Chem. Inc.*, 151 F.3d 269, 274 (5<sup>th</sup> Cir. 1998).

## 2. Epidemiological Standards

Courts generally consider epidemiological studies to be the best evidence in determining whether an agent can cause and did cause a given disease in a specific plaintiff. *Allen v. Pennsylvania Engineering Corp.*, 102 F.3d 194, 196 (5<sup>th</sup> Cir. 1996). This is true even though epidemiology is concerned with the incidence of disease in populations and does not in and of itself address the question of the cause of an individual's disease. See *DeLuca v. Merrell Dow Pharms., Inc.*, 911 F.2d 941, 945 & n.6 (3d. Cir. 1990) ("Epidemiological studies do not provide direct evidence that a particular plaintiff was injured by exposure to a substance.")

It is important to note that "epidemiology cannot objectively prove causation; rather, causation is a judgment for epidemiologists and others interpreting the epidemiologic data." Michael D. Green, et al., "Reference Guide on Epidemiology," *Reference Manual on Scientific Evidence*, 375 (Federal Judicial Center 2000).

With regard to epidemiological evidence, there are additional factors, known as the Bradford-Hill factors, that the court should consider in opening the gate to epidemiological opinions on the ultimate question of whether a given agent generally can and specifically did cause a given disease. The factors include :

- a. temporal relationship (*i.e.*, did exposure precede disease?);
- b. strength of the association (is the relative risk ratio or the odds ratio 2.0 or more and is the p-value (rate of error) or CI - confidence interval, .05 (*i.e.* 5%) or less?);
- c. dose-response relationship (Generally, higher exposures should increase the incidence (or severity) of disease);
- d. replication of the findings (It is important that a study be replicated in different populations and by different investigators before a causal relationship is accepted by epidemiologists and other scientists);

- e. biological plausibility (coherence with existing knowledge);
- f. consideration of alternative explanations;
- g. cessation of exposure (*i.e.*, does the danger of the disease stop when exposure ceases? When such data are available and eliminating exposure reduces the incidence of disease, which is sometimes difficult to find, this factor strongly supports a causal relationship) ;
- h. specificity of the association; and
- i. consistency with other knowledge.

*Id.* at 375. According to Green, et al., there is no formula or algorithm that can be used to assess whether a causal inference is appropriate based on the Bradford-Hill factors. One or more factors may be absent even when a true causal relationship exists. Similarly, the existence of some factors does not ensure that a causal relationship exists. Drawing causal inferences after finding an association and considering these factors requires judgment and searching analysis, based on biology, of why a factor or factors may be absent despite a causal relationship, and vice-versa. *Id.*

### **3. The plaintiff's burden**

The plaintiff's ultimate burden in this case is to prove general causation (*i.e.*, that pentachlorophenol or creosote or the constituents therein *can* cause breast cancer) and specific causation (*i.e.*, that the subject agents specifically caused Sherrie Barnes's breast cancer). *Allen*, 102 F.3d at 198 ("Scientific knowledge of the harmful level of exposure to a chemical, plus knowledge that the plaintiff was exposed to such quantities, are minimal facts necessary to sustain the plaintiffs' burden in a toxic tort case."). In other words, the plaintiff must prove to the jury that it was more likely than not (*i.e.*, a 51% or more chance) that: (1) at least one of the subject chemical agents (or one of their constituents) can cause breast cancer; (2) the minimum amount of the given chemical



agent necessary to cause breast cancer; (3) the amount of the given chemical agent to which Barnes was exposed; and (4) that Barnes was exposed to the requisite amount of at least one of the subject agents to cause her breast cancer.

As stated above, the plaintiff proffers the testimony of Dahlgren to prove general causation, that of Sawyer to prove Sherrie Barnes's daily dose of the subject agents and risk assessment of developing cancer relied upon by Dahlgren and Wolfson, and that of Wolfson to prove specific causation. The defendants have skillfully attacked the ability of the causation experts to meet Fed. R. Evid. 702 standards. Their arguments will be considered in turn.

For the sake of expediency, however, rather than evaluate each and every factor set out above, the court will focus on the insufficiencies argued by the defendants with respect to each expert in question. Furthermore, as a preliminary matter, the court concludes that upon its own investigation and considering there are no serious arguments to the contrary, all three experts meet Fed. R. Civ. P. 26(a)(2)'s requirements regarding their expert reports.

## **B. Analysis**

### **1. Dahlgren**

The defendants advance several arguments that Dahlgren's opinions regarding general causation (*i.e.*, that penta or creosote can cause breast cancer) are unreliable and thus should be excluded under Rule 702. Their major arguments are discussed below.

First, the defendants maintain that Dahlgren does not have a reproducible method because he admits that although he considered a wide range of the relevant scientific literature, he did not set out to rank the studies in a systematic way on paper. Thus, the defendants argue, Dahlgren's method is subjective and is mere *ipsi dixit*, or learned say-so. Upon consideration of the briefing on this

issue, the court concludes that it is not mere learned say-so to reach an epidemiological opinion whether a given agent can, or cannot, cause a given disease when an epidemiological expert who is qualified by his experience, education, and knowledge reviews all of the relevant scientific literature and concludes that the weight of the literature, in his view, supports an association even though that same expert may not have ranked the value of each study on paper. Such a ranking would be helpful, but it does not necessarily mean that Dahlgren's ultimate opinion is subjective. The very nature of epidemiological inquiries into general causation requires consultation of the relevant literature and making conclusions therefrom. Whether or not a ranking is set out on paper is not fatal, given that an expert's conclusion whether there is or is not an association between an agent and a disease is proof enough how he weighed the literature.

Second, the defendants insist that Dahlgren fails to establish that penta or creosote can cause breast cancer. This argument relates to the defendants' other argument that Dahlgren's hundreds of references in his report unreliably establish an association between penta/creosote and breast cancer. These arguments, however, are a matter of semantics. Any insufficiency of the relevant literature regarding whether specifically penta or creosote can cause breast cancer is logically allayed by literature regarding the constituents of these chemicals – especially the polycyclic aromatic hydrocarbons (PAHs) and benzene in creosote and the dioxin in penta. It is undisputed that PAHs, benzene, and dioxins are known human carcinogens. The defendants argue that the "individual constituents" theory is flawed. However, the court concludes that it is perfectly logical to argue that though there may be a paucity of specific evidence that a given chemical mixture causes a disease, since there is evidence that one of the constituent chemicals does cause a disease, it is reasonable to conclude that the mixture causes a disease. Otherwise, one could advance the fallacy that although

sugar has been shown to be problematic for diabetics, since there is no specific proof that candy bars will endanger diabetic, candy bars are perfectly safe for diabetics. This is not to say that Dahlgren's theory is correct – that is a matter for the defendants to argue during cross-examination and for the jury to decide.

Third, the defendants argue that Dahlgren has insufficient support for his mixture or synergy theories – that is, either the PAHS or benzene contained in creosote or the dioxin in penta or a mixture of some or both can cause breast cancer. Note that given the limitations set out above, Dahlgren can only opine the mixture theory with regard to general causation. As with the “individual constituents” theory discussed above, it is perfectly reasonable to posit that a mixture of carcinogens can cause cancer just as individual carcinogens can cause cancer.

The next three arguments against Dahlgren are: (1) he fails to establish an adequate foundation for specific causation; (2) he didn't consider alternative risk factors for Sherrie Barnes; (3) his genetic susceptibility theory is speculation. Since the court has already limited Dahlgren's testimony to general causation, the court concludes that these arguments are moot with regard to Dahlgren.

Consulting the Bradford-Hill factors, the court concludes as follows. As to temporal relationship, it is undisputed that Dahlgren's theory on an association between penta or creosote or their constituents presupposes that exposure precedes the disease. With regard to the strength of the association between PAHs, dioxin, or benzene and breast cancer, and the dose-response relationship, Dahlgren reasonably posits – as will be discussed more fully below – that any exposure to known carcinogens can cause cancer and the higher the dose, the higher the risk. Regarding replication of the findings, Dahlgren points to several studies associating PAHs, benzene, and dioxin with cancer.

Therefore, this is not a case in which there is a completely novel theory. As to biological plausibility, there is no serious dispute that Dahlgren's opinions are incoherent with existing knowledge. The defendants argue that Dahlgren did not consider alternative explanations with regard to Sherrie Barnes's breast cancer such as her being overweight, her smoking, her personal and family history of benign breast disease, trash burning, etc. The plaintiff disputes this, arguing that Dahlgren did indeed consider alternative explanations and concluded that the alternatives pale in comparison to the danger posed by the exposure to carcinogens. Of course, since the court has limited Dahlgren to testify regarding general causation, he will not be opining as to Sherrie Barnes's specific risk factors. Regarding cessation of exposure – *i.e.*, whether the danger of the disease stops when exposure ceases – Dahlgren argues that since the higher the exposure the higher the risk, the opposite is true as well, though he does not point to data proving cessation to exposure. As to specificity of association, Dahlgren opines that the subject chemicals or a combination thereof can specifically cause breast cancer because of the nature of the breasts containing large amount of lipids in which the subject agents can be stored. Finally, the basic theory that known carcinogens such as PAHs, benzene, or dioxin can cause cancer, including breast cancer, is obviously consistent with other knowledge regarding carcinogenic effects on human tissue.

The court concludes that consideration of the Bradford-Hill factors works to render Dahlgren's testimony regarding general causation sufficiently reliable as to not be junk science.

The court will now examine the *Daubert* and Advisory Committee factors. The court concludes that Dahlgren's theory that PAHs, benzene, or dioxin or a mixture thereof can cause breast cancer is one that is not a mere subjective theory and one that can be tested simply by an independent review of the literature. This factor does not require the theory to be correct but rather to be

verifiable. The defendants' experts disagree with Dahlgren's theory, but that does not render his theory merely conclusory. There is no dispute that Dahlgren's opinions regarding PAHs, benzene, and dioxin were not based on peer-reviewed, published reports. As to the rate of error of the theory, the court is unclear whether or not the p-value is more than .05 or 5%. That is something that will have to be discussed at trial. Likewise, the court is unclear what standards and controls were used. The theory did arise from litigation. Of course, many of the defendants' experts' opinions did as well. As stated above, the court finds that Dahlgren did adequately consider alternative explanations – he simply gave them less weight than did the defendants' experts. Whether Dahlgren was as careful as he would have been in his regular professional work outside his paid litigation consulting is difficult to determine. The court finds this question difficult to determine with regard to all trial experts, given that they are all paid for their testimony. Finally, Dahlgren's field of expertise – medical toxicology and epidemiology – is known to reach reliable results as far as Rule 702 is concerned.

Because there is no contention that Dahlgren is qualified to give his opinions, the court concludes that pursuant to Rule 702, his testimony is based on sufficient facts because he consulted all the relevant literature regarding associations between cancer and the chemicals at issue – even if only the constituents of those chemicals. With regard to the part of general causation that requires proof of “how much is enough” to cause cancer, Dahlgren opines that any amount of a known human carcinogen is enough to cause cancer. In Dahlgren's deposition testimony is the following exchange:

Q: Can you give me a dose of creosote or a dose of dioxin which you would consider to be a significant dose for the purpose of causing breast cancer or is that something, again, you would defer to Dr. Sawyer?

A. Well, I think – again, these people are at increased risk of cancer as a result of the exposure. And specifically, one of the cancers to which they are at risk – I mean, all of the people in this neighbor[hood] are at risk of breast cancer because of the nature of these chemicals that we alluded to in the last two days [of the deposition]. The nature of these chemicals being endocrine disruptors concentrating the fatty tissue of the breast, specifically in the fairly active tissue, breast tissue. Every tissue that these chemicals reach, it can increase the risk of the cancer in those tissues; but breast is particular at risk because of its lipid nature and the lipid nature of these chemicals and because the metabolic activity and the sensitivity to estrogen which these chemicals mimic. So for a variety of reasons, these chemicals we are talking about increase the risk. And as far as I know, there is no safe level of exposure to a carcinogen. What we do with our quantitative risk activity is try to define the level which we consider to carry with it a so-called acceptable level of risk, is a very low risk; but I don't know of any – well, any evidence that there is a threshold for cancer effects. So then the answer to your question is that any exposure is going to increase the risk. The higher the exposure, the higher the risk. ...

The defendants argue in their motion to exclude Wolfson that such a “no safe threshold” theory has been rejected “across the country,” yet they only cite a case directly on point from Massachusetts which is hardly “across the country.”

Furthermore, for the reasons discussed above, the court concludes that his testimony regarding general causation were the product of reliable methods applied reliably to the facts. Again, this is not to say Dahlgren is correct but rather that he has met the threshold of not proffering junk science.

## **2. Sawyer**

As cited above, the plaintiff characterizes Sawyer's testimony in the following way:

Dr. Sawyer ... addresses the issue of dose on a daily basis, as it relates to Sherrie Barnes. Dr. Sawyer also provides critical information to plaintiff's medical experts in the sense that he also conducted a risk assessment regarding Sherrie Barnes's lifetime exposure to these hazardous materials. This risk assessment demonstrated

the magnitude of Sherrie's dose and how her chances of developing the disease was magnified as a result of defendants' failure to properly manage their environmental responsibilities.

In other words, in the context of the plaintiff's epidemiological proof, the plaintiff seeks to offer Sawyer's testimony to help link testimony of general causation (*i.e.*, providing dose information to help determine if the subject chemicals can cause breast cancer) with that of specific causation (*i.e.*, providing dose information for Wolfson to determine whether Barnes was exposed to enough of one of the subject chemicals to cause Barnes's breast cancer). Sawyer's risk assessment of Sherrie Barnes also goes to proof of specific causation and general causation.

The defendants make several arguments to exclude the testimony of Sawyer. First, they argue that like Dahlgren, Sawyer does not demonstrate that penta or creosote can cause breast cancer or that it did cause breast cancer in Sherrie Barnes. However, given that the court has limited Sawyer's testimony to that of dosage and risk assessment regarding Sherrie Barnes, the court concludes that Sawyer is not required to demonstrate that the subject chemicals or their constituents can or did cause breast cancer. The defendants' next four arguments are similarly rendered moot given the court's limitation of Sawyer's testimony. These arguments include: Sawyer's testimony is cumulative; he has no reproducible method for assessing causation; he has not established general causation; and he fails to establish specific causation with his dose reconstruction.

The defendants maintain that Sawyer's dose reconstruction is speculation because it presumes that Sherrie Barnes consumed dust. Having considered the briefs, however, the court concludes that the dose reconstruction is specific and reasonable enough to take it beyond the realm of speculation, especially since it is undisputed that everyone consumes a given amount of dust each day.

Finally, the defendants posit that Sawyer's risk assessment does not "fit" the facts of the case because he extrapolates constituent exposures rather than to creosote or penta. As explained above, the court finds this reasonable.

It is unnecessary to consult the Bradford-Hill factors with regard to Sawyer simply because his testimony is limited to dosage and risk assessment (the latter of which is logically based on Dahlgren's general causation testimony) rather than general or specific causation. Having consulted the *Daubert* and Advisory Committee factors, the court concludes that Sawyer's dosage and risk assessment testimony (as long as the latter is based on Dahlgren's general causation testimony) meets the threshold requirements of Rule 702. It is undisputed that Sawyer is qualified by his knowledge and education to render his dosage and risk assessment testimony. His testimony regarding Sherrie Barnes's dosage and risk assessment is based on sufficient facts and reliable methods interpreting same. The defendants are free to bring out the perceived flaws in Sawyer's testimony during cross-examination.

### **3. Wolfson**

The plaintiff seeks to offer Wolfson's testimony to prove specific causation – *i.e.*, given Dahlgren's testimony that PAHs, benzene, and dioxin can cause breast cancer, and Sawyer's testimony regarding the levels of exposure to those chemicals and risk assessment of Sherrie Barnes, at least one of the subject agents or a mixture thereof specifically caused breast cancer in Sherrie Barnes.

The defendants argue that Wolfson's testimony should be excluded because he is not qualified to render his opinions, his opinions do not meet *Daubert* standards, and his testimony is cumulative. The latter argument is moot given that the court has limited Dahlgren's testimony to



general causation, Sawyer's testimony to dosage and risk assessment, and Wolfson's testimony to specific causation.

The defendants contend that Wolfson is not qualified to render opinions on specific causation because he is an expert in medical monitoring which involves periodic medical evaluations of living persons, while Sherrie Barnes is deceased. Wolfson's other area, the defendants argues, is clinical occupational environmental medicine and since Barnes did not work at the Grenada plant, this area of expertise is also moot. The court, however, agrees with the plaintiff's assessment that since Wolfson's primary area of medical expertise is environmental medicine, he is qualified by knowledge, skill, experience, training, and education in that area to render opinions regarding specific causation as to Sherrie Barnes.

The defendants argue that Wolfson's opinions do not meet *Daubert* standards because he provides no reproducible method for reviewing the relevant literature because he did not articulate how he analyzed the literature, he has not established general causation, he does not prove specific causation as to Sherrie Barnes because his differential diagnosis (*i.e.*, ruling out what did not cause Sherrie Barnes's breast cancer as a method of ruling in what did cause the breast cancer) of Sherrie Barnes does not fit with the facts of this case. The first argument is not well-taken for the same reasons the court discussed with regard to Dahlgren. It is not necessarily fatal for an expert to review relevant literature within his field of expertise and to form an opinion therefrom without writing down how he weighed the findings of that literature. Such is not mere learned say-so as to render the expert's conclusions as speculation. The second argument is moot given that Wolfson has been limited to testifying to specific causation, testimony that is based on Dahlgren's general causation testimony. Finally, the court concludes that there is nothing inherently faulty regarding a differential

diagnosis.

The court concludes that there are no *Daubert* or Advisory Committee factors regarding Sawyer's specific causation testimony that act to prevent that testimony from passing through the gates of Rule 702. The defendants are free to cross-examine Sawyer regarding their criticisms of his testimony.

### **III. CONCLUSION**

The court concludes that Defendants' Motion to Exclude Expert Testimony of James G. Dahlgren, M.D. [464-1], Motion to Exclude Expert Testimony of Dr. William R. Sawyer [474-1], and Motion to Exclude Expert Testimony of Michael A. Wolfson, M.D. [477-1] should be granted in part and denied in part as explained above. Accordingly, an Order shall issue forthwith,

**THIS DAY** of February 2, 2006.

/s/ W. Allen Pepper, Jr.  
W. ALLEN PEPPER, JR.  
UNITED STATES DISTRICT JUDGE